Management of Heathlands at Cape Cod National Seashore

Background

Heathlands are open landscapes comprised mainly of low-growing shrubs and grasses with few or no trees. In the northeast United States, the greatest concentration of rare plant species occurs in heathland areas. They also provide habitat for a variety of wildlife such as the Vesper sparrow, field sparrow, grasshopper sparrow, meadow vole, and white-footed mouse.

Heathland plant communities of Cape Cod National Seashore (CACO) thrive on very sandy, acidic, nutrient-poor, and well drained soils. These conditions support a unique assemblage of plants that have a variety of adaptations to withstand this harsh physical environment. The vegetation is dominated by plants in the family Ericacea, which includes a variety of shrubs and sub-shrubs. Many plants are able to conserve water due to their waxy leaves with small surface-area to volume ratios that limit evaporation. Plants are generally small and grow close to the ground. In this way they are protected from wind and sand blasting. The development of large storage roots (rhizomes) allows the plants to survive burial in sand.

Example of a heathland landscape at CACO.

Status & Trends

In the 20th and 21st centuries, heathlands have diminished due to coastal development and vegetation succession. With respect to the latter, the encroachment of trees such as pitch pine onto heathlands has converted this habitat into woodlands and closed-canopy forest. This process has been aided by a lack of physical disturbance in the form of fires. Modern fire suppression has not allowed succession to be periodically set back so that that open landscapes are created and/or maintained and heathland species can regenerate. Prior to European settlement, natural fires were apparently common on Cape Cod. With advanced fire detection and suppression techniques, however, the incidence of fire has greatly decreased. Consequently, trees have proliferated and heathlands have diminished. This decline is a management concern from the standpoint of both species conservation and cultural resources as the disappearance of heathlands greatly impacts view sheds.

Management Applications

CACO fire crews have been conducting cutting treatments followed by controlled burns in heathlands since the 1980s. More recently, there has been a great deal of activity within the Marconi area of CACO in Wellfleet, where fire crews have cut and burned a large amount of shrubs and trees that had encroached upon heathland habitat. This type of vegetation management has been successful in re-opening the landscape such that heathland vegetation and wildlife can thrive.

CACO fire crew burning heathland area.

Continued management of heathlands at CACO will help preserve this critical plant and wildlife habitat and maintain important view sheds that enhance the visitor experience.

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More Information

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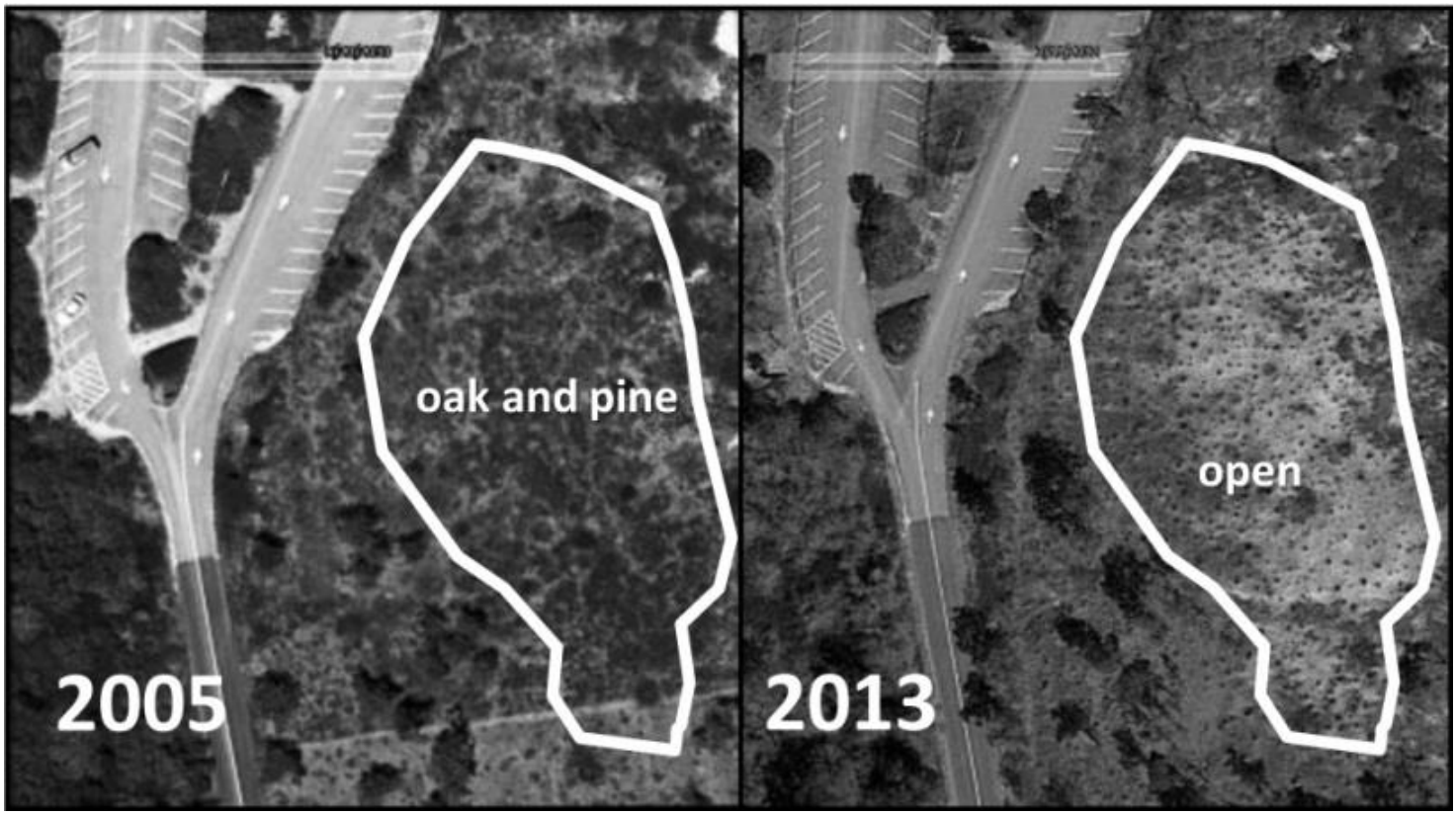
Learn more about Science and Research at Cape Cod National Seashore



Results of cutting and burning: creation of open habitat.